

REMARKS

Claims 1, 2, 5, 6, 9, 10, 20, 21, 24, 25, 28, 29, 32, 33 and 36-53 are pending in this application, with claims 1, 2, 38 and 39 being independent. Claims 1, 32 and 33 have been amended; and claims 38-53 have been added. In particular, claim 1 has been amended to recite irradiating the resist pattern with a light having a photosensitive wavelength region of the photosensitizer to expose the resist pattern entirely to the light after etching the metal film, and claims 32 and 33 have been amended to correct a typographical error. Support for the amendment of claim 1 and the new claims can be found in the published application (U.S. Patent Application Publication No. US 2004/0091820) at least at paragraphs 0031 to 0044 and Figs. 1A-2D. No new matter has been introduced.

Applicants acknowledge with appreciation the Examiner's allowance of independent claim 2 and its dependent claims 6, 10, 21, 25, 29, 33 and 37.

Independent claim 1 and its dependent claims 9, 20, 24, 32 and 36 have been rejected as being unpatentable over Parks (U.S. Patent No. 4,646,424) in view of Hallock (U.S. Patent Application Publication No. 2002/0151156). Claim 5, which depends from claim 1, has been rejected as being unpatentable over Parks in view of Hallock and Ho (U.S. Patent No. 6,645,851). Claim 28, which depends from claim 1, has been rejected as being unpatentable over Parks in view of Hallock and Katohno (U.S. Patent No. 4,673,808).

As stated above, independent claim 1 has been amended to recite that the resist pattern is irradiated with a light having a photosensitive wavelength region of the photosensitizer to expose the resist pattern entirely to the light after etching the metal film. Applicants request reconsideration and withdrawal of the rejections of claim 1, and its dependent claims, because neither Parks, Hallock, Ho, Katohno, nor any proper combination of the four describes or suggests this feature.

As acknowledged by the Examiner on page 3 of the Office Action, Parks does not describe or suggest irradiating a resist pattern with light after using the resist pattern to etch a metal film. The Examiner relies on Hallock to disclose this feature.

Hallock describes a process for removing photoresist after an ion implantation step. Hallock's process includes forming a resist pattern p on a substrate and then implanting ions into the resist pattern and the substrate, as shown in Figs. 1B and 1C of Hallock. Hallock describes that such an implantation of ions into the resist pattern can result in a chemical reaction between a portion of the resist and the dopant ions such that a "crust" is formed on the surface of the photoresist. See paragraph 0018, lines 16-24 and crust "C" shown in Fig. 1C. This surface crust has different stripping properties compared to the photoresist located below the surface of the resist pattern that was not exposed to the dopant ions. See paragraph 0018, lines 30-35. Specifically, Hallock asserts that the surface crust makes the resist pattern more difficult to remove. See paragraph 0018, lines 35-37. To address this problem, Hallock describes a UV irradiation step to irradiate the surface of the resist pattern, as shown in Fig. 1D. This surface irradiation of the resist pattern "causes photochemical rearrangements in the underlying bulk photoresist which, in turn, causes an increase in the removal efficiency of the ion implanted photoresist layer." See paragraph 0020, lines 1-5. That is, the process of irradiation contemplated by Hallock is a process of irradiating the surface of the resist pattern (i.e., the resist surface crust) with UV radiation to enhance the removal efficiency of the ion implanted photoresist. In contrast, the recited irradiation of the resist pattern is an irradiation to expose the resist pattern entirely, not just its surface, to the light. Ho, which is relied upon by the Examiner for disclosing a photosensitizer, and Katohno, which is relied upon by the Examiner for disclosing a resist stripper having a mixture of 2-aminoethanol and a glycol ether as a composition, also fail to describe or suggest the above-noted feature.

For at least these reasons, applicants request reconsideration and withdrawal of the rejection of claim 1 and its dependent claims.

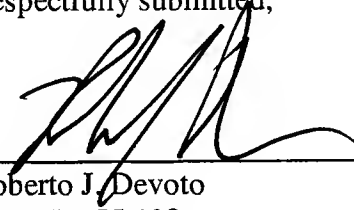
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Applicants submit that all claims are in condition for allowance.

The fees in the amount of \$1,272 for excess claims are being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,



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